

# PATENT SPECIFICATION COPY



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## COMPLETE SPECIFICATION.

### Process of Manufacturing Alcoholic Beverages.

We, COMPAGNIE INTERNATIONALE OENOLOGIQUE SOCIÉTÉ ANONYME, a Company organised under the Laws of Belgium, of Rue Arthur Sterckx 48, Berchem-Anvers, Belgium, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

10 This invention relates to a process for obtaining an alcoholic beverage having the organoleptic and chemical properties of wine by the fermentation of other substances than grapes.

15 It has already been proposed to manufacture fermented drinks which can be substituted for wine, by the use of various fruits, except grapes, but the wines thus obtained differ considerably from grape wine by their taste and their chemical composition.

According to the present invention, the 20 fermentation process is characterised in that a mixture of vegetables, e.g. chick 25 peas, green peas and yellow peas, is added as a fermenting substance to afford the flavour and bouquet, to the customary substances employed in the manufacture of artificial wine, such as sugar, organic acids (tartaric and citric acids for example), tannin or gallic acid and inorganic substances (alkaline bisulphites and phosphates for example).

The product obtained by the use of the 30 process according to the invention constitutes a beverage which exactly resembles wine as concerns the taste, and even from a chemical standpoint as is found by analysis, and it thus possesses all the 35 hygienic and tonic qualities of wine.

The said process, as compared with the known methods employing fruits, has great practical advantages. In particular the use of vegetables such as peas is much 40 more economical than that of fruits. On the other hand, it permits the preparation of the beverage in any locality and in all seasons, which is obviously not the case for fruit.

45 The mixture of chick peas, green peas and yellow peas employed, as well as the additional substances above mentioned are treated, in principle, according to the

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wine-making methods employed in modern practice, the converting agents consisting of figured ferments (elliptical yeasts or the like) or of soluble fragments or diastases, such as enzymes, sucrases etc. 55

By way of example, the quantities to be employed for 100 litres of drink are as follows:

1. 100 litres of water.
2. For the vegetables and sugar, for each percentage of degree of alcohol :

60 grams of chick peas. 65

40 grams of green peas, 70

30 grams of yellow peas, 75

1.710 kilograms of crystallized sugars.

3. The other substances, whose weight is the same, irrespective of the degree of alcohol, are:

100 grams of citric acid, 80

120 grams of tartaric acid,

24 grams of tannin or gallic acid,

10 grams of alkaline bisulphites, 75

20 grams of alkaline phosphates.

The treatment of these various substances, for the manufacture of wine, comprises two operations:

A. Manufacture of a substance forming a " food " or basis of the beverage.

B. Manufacture of the beverage itself.

The following is an example of the manufacture of 100 litres of wine containing 10 per cent of alcohol by volume.

#### A. MANUFACTURE OF THE BASIC SUBSTANCE.

a) Take 1.3 kg. of the vegetables in the above mentioned proportions, or

600 grams of chick peas,

400 grams of green peas, 90

300 grams of yellow peas.

b) Make an intimate mixture of the following substances:

1 litre of water,

100 grams of sugar,

52 grams of tartaric acid, 95

50 grams citric acid,

24 grams tannin or gallic acid.

The mixture is boiled for about ten minutes, after having optionally added caramel.

c) This solution is poured upon the 1.3 kg. of vegetables which have been preliminarily ground into large grains, and the whole is mixed.

The product is allowed to stand over

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night, and it is then spread upon boards or upon sheets of cloth suspended with exposure to air and sunlight, or other drying means may be employed, care being taken 5 to carry out the process in a warm atmosphere. The product must be stirred at intervals, to effect a uniform drying and if any lumps are formed, these must be broken up. It should be remarked that 10 the substances thus transformed will increase in weight, and this will afford 1.526 kg. of material.

B. MANUFACTURE OF THE BEVERAGE ITSELF.

15 a) 17 kgs. of crystallized sugar are dissolved in about 10 litres of water, with 50 grams of citric acid and 68 grams of tartaric acid, for the inversion of the sugar. This solution is then boiled for a 20 few minutes, and poured into a barrel which already contains 80 litres of water, the whole being subsequently mixed.

b) A treating substance is preliminarily prepared as follows: mix 0.750 litres of 25 water, 150 grams of sugar and 1 gram of citric acid, boil this solution, and place it in a receptacle of the proper strength. When the temperature of the mixture has fallen to 30° C., add 30 grams of the above 30 mentioned solid basic substance, then add a spoonful or a small glass of the wine to be imitated, or suitable ferments. The receptacle is corked with a slotted cork in order that the carbonic acid gas may 35 escape, and the mixture is kept in a place which is heated to 30°. In three days, the microbes will have sufficiently developed.

c) When the temperature of the liquid 40 obtained according to a) has fallen to 30°, add:

1.5 kg. of the solid substance indicated at A, the treating substance indicated at (a),

45 10 grams of alkaline bisulphites,  
20 grams of alkaline phosphates.

The fermentation is then regulated according to the known methods.

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is:—

1. A fermentation process for the manufacture of alcoholic beverages of the wine class, characterised in that a mixture of vegetables, e.g. chick peas, green peas and yellow peas, is added as a fermenting substance to afford the flavour and bouquet, to the customary substances employed in the manufacture of artificial wine, such as sugar, organic acids (tartaric and citric acids for example), tannin or gallic acid and inorganic substances (alkaline bisulphites and phosphates for example).

2. A method of execution of the process claimed in claim 1, characterised by the fact that the beverage is obtained by two successive operations, the first consisting of the preparation of a "food" or base, formed by an intimate mixture of ground vegetables, such as chick peas, green peas, and yellow peas, with an aqueous solution of sugar, tartaric acid, citric acid and tannin, this preparation being then dried, the second consisting of the manufacture properly so called, of the beverage itself which consists in adding a suitable treating substance and a certain proportion of the said "food" or base, to the quantity of water corresponding to the desired quantity of the beverage, in which there is first dissolved sugar, with the addition of citric acid and tartaric acid for the inversion of the sugar.

3. The complete process for the manufacture of alcoholic beverages as described.

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